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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,574	11/30/2005	Carl Binding	CH920020024US1	7879
877 7590 03/09/2009 IBM CORPORATION, T.J. WATSON RESEARCH CENTER P.O. BOX 218 YORKTOWN HEIGHTS, NY 10598				
EXAMINER				
SMITH, CREIGHTON H				
ART UNIT		PAPER NUMBER		
2614				
MAIL DATE		DELIVERY MODE		
03/09/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/535,574

**Applicant(s)**

BINDING ET AL.

**Examiner**

CREIGHTON SMITH

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al in view of Carlsson and Engelhart and Miernik et al.

Examiner disagrees with applicant's argument on page 5 of the remarks filed 03 SEP '08 that Willars is apparently not concerned with an external network control unit that manages network resources for the wireless units. Willars et al clearly disclose in col. 5, lines 43 et seq. that the radio network's control node **determines** the allowed areas for the UE and **performs** the filtering of the list of cells for handover to the UE. By "determining" and "filtering" the network control node is deemed to be managing network resources for the mobile units. By the network control unit managing the network resources for the wireless units, it removes the management capacity from the wireless units themselves and gives it one central controller, thus freeing up battery power for the wireless units to do what they have always been intended to do –

communicate with other wireless units. Also in col. 4, lines 28 et seq. Willars discloses that the radio network controller (RNC) **stores** cell info for all cells that it controls and all neighboring cells. When a mobile is using a dedicated radio channel, the UTRAN transmits to the mobile a list of channels for which the mobile is to measure the signal strength of a transmission received on each of those channels associated with neighboring cells. The mobile then measures the signal strengths of transmissions received from each of those neighbor cells and reports the strongest ones, which become candidates for handover. Therefore, Willars et al have clearly shown that the RNC manages the resources of the wireless units.

Regarding applicant's arguments on page 6, that Willars et al are not concerned with "vertical handover", this argument is moot because vertical handover is not claimed. Additionally, there is no definition of either horizontal or vertical handover/handoff in Newton's Telecom Dictionary, and applicant has supplied no definition in their spec of a vertical and/or horizontal handover. The only types of handover disclosed in Newton's are soft and hard.

Neither Carlsson nor Engelhart are being relied upon to teach a network controller that manages resources for wireless units. Willars et al are being relied upon for that teaching.

Willars et al disclose in col. 5, lines 17 et seq., a technique to provide a mobile phone a list of neighboring cells that are adapted to that specific mobile's subscription. In line 23 of col. 5 Willars et al disclose that a determination is first made that a target cell controlled by the drift node's controller should be prepared for a **handover**. The target

cell is neighbored by other cells, with the mobile station being permitted to access radio resources or to **handover** to cells in one subset of cells but not permitted to handoff to other cells. A filtered list of cells is sent to the user equipment (UE) which only includes the cells which the radio network's controller will allow the UE to access. In lines 43 et seq., Willars et al disclose that the radio network's control node determines the allowed areas for the UE and also filters out the non-allowed cell areas, presumably those cell areas that would not support the UE's subscription requests. In col. 4, lines 28 et seq., Willars et al disclose that the radio network controller stores cell info for all cells it controls and all neighboring cells. The RNC's UTRAN will transmit to the mobile subscriber a list of channels for which the mobile is to measure the signal strength. The mobile station measures the signal strengths of transmissions received from each of the neighboring cells and reports the strongest ones, which become candidates for **handover**. Willars et al disclose a look-up table @ col. 6, lines 5-12, and in col. 5, lines 25-35 the controller determines which subset of cells to permit the mobile user to transition into.

Willars et al never specifically mention that the position of the UE is ever made. However, Carlsson discloses in P.0002 a number of methods have been proposed for determining the position of a mobile terminal. One method, such as GPS, incorporates a GPS positioning receiver into the mobile terminal. Therefore, Carlsson has readily admitted that GPS may also be used to determine a UE's position. To have provided Carlsson's teaching of determining a mobile station's location in Willars et al radio network would have been obvious to a person having ordinary skill in the art because

both references are teaching 3<sup>rd</sup> generation services (3GPP) to a mobile user as the user is moving, or roaming, from one cell area to another. In P.0003 Carlsson discloses that a mobile terminal will contact a network via the base station in each cell before being instructed by the communications system to retune to the next base station. The only reason a mobile station would retune to another base station is if the signal is getting weak, and the only reason that a signal would be getting weak is if the UE is moving farther away from the BS's transceiver, i.e., roaming, and thus necessitating a **handover** to another cell site and Base Station. Therefore, with both Willars et al and Carlsson teaching handovers from one mobile cell site to another, the skilled practitioner in the wireless arts would have found these references combinable. Common sense would dictate this substitution.

Willars et al also never discloses communicating the cost of services from a service/control node to a mobile user. However, Englehart does disclose in P.0006 that a subscriber can access services which are limited by the service plan to which the user subscribes. In P.0027 & P.0028 Engelhart discloses that a service node 114 communicates to the mobile user 122 the capabilities and costs of the service node 114. To have provided Engelhart's disclosure of a node communicating the cost of using the services of that particular provider in Willars et al communication system would have been obvious to a person having ordinary skill in these wireless arts because both references are teaching providing services to a roaming subscriber. Engelhart specifically mentions "roaming" twice in P.0006.

Willars et al never specifically disclose a control node's processor measuring the current load or bandwidth of a particular sector before allowing a handoff. Miernik et al disclose a roaming mobile phone user. Col. 1, lines 27-42, and soft handoff of that mobile phone in col. 6, line 29. In col. 12, lines 30-44, Miernik et al disclose that a database 95 contains data regarding service nodes 61. Miernik goes on to disclose that when processor 92 attempts to select one of the serving nodes, the processor attempts to balance the load between the nodes 61 based on their respective capacities and/or **current load**. The current load on a serving node may depend on CPU usage, memory usage, occupancy, **bandwidth usage**, or any other appropriate factor. To have provided Miernik's teaching of the control node's processor measuring the current load/bandwidth of a particular sector before allowing a handover into Willars et al would have been obvious to a person having ordinary skill in the art because if one wireless sector is filled to capacity with users requesting services it would be futile to cram other users into that sector because the QoS would be far less than if the user was placed in a sector where the load was less. Additionally, Miernik et al disclose roaming subscribers in col. 1, lines 27-29. Therefore, since all 4 references teach roaming mobile units, a skilled practitioner in these arts would have found these references combinable.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Creighton H. Smith at telephone number 571/272-7546.

02 MAR '09

/CREIGHTON SMITH/  
Primary Examiner, Art Unit 2614